

APPLICANT(S): KRITCHMAN, Eliahu M. et al.
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AMENDMENTS TO THE CLAIMS

Please add or amend the claims to read as follows, and cancel without prejudice or disclaimer to resubmission in a divisional or continuation application claims indicated as cancelled:

The following list of claims is intended to replace all prior versions or listings of claims in the application.

Listing of Claims:

1.-196. (Canceled)

197. **(Currently Amended)** A method for printing a three-dimensional object comprising:

depositing material in layers onto a printing tray to form a three-dimensional object; and

controlling the temperature of more than one upper layer of said object being printed so as to maintain the temperature of two or more upper layers above the glass transition temperature of said material such that said upper layers remain in a flowable state.

198. (Previously Presented) The method of claim 197, wherein controlling the temperature of said layers comprises controlling the temperature during a printing process.

199. (Previously Presented) The method of claim 197 comprising depositing more than one material.

200. (Previously Presented) The method of claim 197 further comprising:

heating said material before depositing.

201. (Previously Presented) The method of claim 197 comprising:

heating said printing tray.

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202. (Cancelled)

203. (Previously Presented) The method of claim 197 comprising:

controlling the temperature of lower layers of said object to be
below the glass phase transition temperature of said material.

204. (Previously Presented) The method of claim 197, wherein controlling the temperature of said layers comprises controlling the temperature of said layers by one or more temperature control mechanisms selected from the group consisting of: electromagnetic radiation, exothermic chemical curing, a heating element and a cooling element.

205. (Previously Presented) The method of claim 204, said cooling element being an air sucking unit.

206. (Previously Presented) The method of claim 204, said cooling element being an air blowing unit.

207. (Previously Presented) The method of claim 197, wherein controlling the temperature of said layers comprises operating cooling elements according to reading received from a temperature sensor.

208. (Previously Presented) The method of claim 197, wherein controlling the temperature of said layers comprises operating heating elements according to reading received from a temperature sensor.

209. (Withdrawn) A system for printing a three-dimensional object, the system comprising:

a printing head for depositing material in layers;

a printing tray upon which the material is deposited; and

a controller for controlling the temperature of the layers to substantially the glass transition temperature of said material.

210. (Withdrawn) The system according to claim 209, wherein the controller is to control the temperature of the layers during the printing process.
211. (Withdrawn) The system according to claim 209, wherein said printing head is to deposit more than one material.
212. (Withdrawn) The system according to claim 209 further comprising:
a heating unit to heat the material before it is deposited from the printing head.
213. (Withdrawn) The system according to claim 209, wherein said printing tray comprises one or more temperature control units.
214. (Withdrawn) The system according to claim 209, wherein the controller is to control the temperature of upper layers of said object to be above the glass transition temperature of said material.
215. (Withdrawn) The system according to claim 209, wherein the controller is to control the temperature of lower layers of said object to be below the glass transition temperature of said material.
216. (Withdrawn) The system according to claim 209, further comprising:
one or more temperature control mechanisms selected from the group consisting of electromagnetic radiation, exothermic chemical curing, a heating element and a cooling element.
217. (Withdrawn) The system according to claim 216, wherein said cooling element comprises an air blowing unit.
218. (Withdrawn) The system according to claim 216, wherein said cooling element comprises an air sucking unit.

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219. (Withdrawn) The system according to claim 216 further comprising:
a temperature sensor and wherein the controller is to operate the cooling and heating elements according to reading received from the sensor.